

REMOTE PLASMA ENHANCED CLEANING APPARATUS

ABSTRACT OF THE DISCLOSURE

A remote plasma enhanced cleaning apparatus including a main process
5 chamber and a loadlock chamber connected to the main process chamber. The
main process chamber includes a staging device adjacent to the loadlock
chamber for loading the silicon wafers from the loadlock chamber into the main
process chamber and for unloading the silicon wafers from the main process
chamber into the loadlock chamber, a carrier robot disposed in a center portion
10 of the main process chamber to transfer the silicon wafers to an adsorption
assembly, an anneal assembly, and a cooling assembly which are disposed in
the main process chamber around the carrier robot. Each of the adsorption
assembly, the anneal assembly, and the cooling assembly includes two stages,
wherein each stage is capable of holding a silicon wafer. Thus, the cleaning
15 apparatus improves the uniformity of a process for cleaning silicon wafers while
increasing throughput.